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3. (Amended) The vacuum treatment chamber of claim 13, wherein the slots have a width d, wherein $d \leq 2$ mm.

4. (Amended) The vacuum treatment chamber of claim 13, wherein the screen comprises metal and is connected with an electrical reference potential.

Add the following claims:

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13. (New) A vacuum treatment chamber for workpieces comprising a treatment space, at least one induction coil encircling said treatment space having a coil axis at least for contributing to generation of a plasma within said treatment space, a hollow screen body having an inner surface and an outer surface, and arranged substantially coaxially to said coil axis around said treatment space, said inner surface being freely exposed to said treatment space, said hollow screen body having a pattern of through-slots extending substantially in a direction of said coil axis and being distributed around said coil axis, a density S of said slots of said pattern per cm of one of said inner and of said outer surfaces and taken in the direction of said coil axis being at least 0.5.

14. (New) The vacuum treatment chamber of claim 13, wherein said vacuum chamber further comprises a dielectric material chamber wall, and said at least one induction coil is mounted one of outside and of inside said chamber wall.

15. (New) The vacuum treatment chamber of claim 13, further comprising at least two electrodes mutually distant from each other inside said treatment chamber and facing said treatment space, said at least two electrodes being operatively connected to an electric supply source selected from the group consisting of a DC source, and AC source, an AC+DC source, pulsed DC source, and an Rf-source so as to contribute to generating said plasma.

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16. (New) The vacuum treatment chamber of claim 13, further comprising a plasma density measuring apparatus and configured to output a signal indicative of instantaneously prevailing plasma density of said plasma, the output thereof being operatively connected as an actual value input of a negative feedback control circuit whose output is operatively connected to said at least one induction coil for adjusting said plasma density.

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17. (New) The vacuum treatment chamber of claim 13, wherein said plasma density measuring apparatus comprises a voltage measuring apparatus having an input, operatively connected to an electrode arranged to be exposed to said plasma.

18. (New) The vacuum treatment chamber of claim 16, wherein said plasma density measuring apparatus is mounted to one of a workpiece support and a target electrode within said vacuum treatment chamber.

19. (New) A method for manufacturing vacuum surface treated workpieces, comprising:

evacuating a vacuum treatment chamber;

introducing a workpiece into a treatment space of said vacuum chamber;

generating in said treatment space a plasma, at least partially inductive with the use of a coil surrounding said treatment space;

providing a hollow screen body with an inner surface and with an outer surface coaxially to said coil, with said inner surface being freely exposed to said treatment space;

providing in said hollow screen body a pattern of through-slots extending substantially in a direction of an axis of said coil and distributed around said coil axis, a density S of said slots of said pattern per cm taken in direction of said coil axis being at least 0.5; and

surface-treating in said treatment space said workpiece exposed to said plasma.

20. (New) The method of claim 19, further comprising generating during said surface-treating of said workpiece electrically conductive material freed into said treatment space.

21. (New) The method of claim 19, further comprising providing said screen body of metal material.

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22. (New) The method of claim 19, further comprising exchanging said screen body upon said inner surface having been loaded by said surface-treating of said workpiece to a predetermined extent.

23. (New) The method of claim 19, wherein surface treating of said workpiece is one of sputter-etching and sputter-coating.

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24. (New) The method of claim 19, further comprising separating, by said screen body, said treatment space from a further space around said outer surface of said screen body, and feeding gas into said vacuum treatment chamber and thereby into said further space.

25. (New) The method of claim 19, thereby selecting said density S to be ≥ 1 .

26. (New) The method of claim 19, further selecting a width d of said through-slots to be ≤ 2 mm.

27. (New) The method of claim 19, further comprising operatively connecting said screen body electrically on a reference potential.

28. (New) The method of claim 19, further comprising additionally generating said plasma by at least two electrodes exposed to said treatment